



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,648	07/15/2003	Yu-Yu Chen	MR2863-120	5264
4586	7590	09/16/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			HOLTON, STEVEN E	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,648	CHEN, YU-YU	
	Examiner	Art Unit	
	Steven E. Holton	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the usage of the term 'spectacle' in the title, disclosure and claims is incorrect. The term 'spectacles' means a pair of eyeglasses, which is the intended meaning; whereas the singular term 'spectacle' is an eye-catching or dramatic public display. The title, disclosure and claims should be edited so that the proper term 'spectacles' is used when describing the invention.

Appropriate correction is required.

Claim Objections

2. Claims 1-19 are objected to because of the following informalities: the use of the term spectacle as part of the preamble. As discussed above the proper term should be spectacles. Appropriate correction is required.

3. Claim 1 is objected to because of the following informalities: the specification discloses that the 'data projecting module' includes the data display unit and lenses as shown in Fig. 2 where the 'data projecting module' is labeled as element 2 that includes the data display unit (element 23). As stated in the claim language, the projecting module and display unit are separate from each other; this may be confusing in light of the specification considering if there is a display unit within the claimed projecting module in addition to the claimed display unit or if they refer to the same unit within the specification. The Examiner recommends changing the claim language to mention that

Art Unit: 2673

the display is part of the projecting module to be in agreement with the specification to avoid confusion of the claimed invention in light of the specification. Appropriate correction is required.

4. Claims 4, 5, and 6 are objected to because of the following informalities: the claims state a 'first focusing lens', 'second focusing lens' and 'third focusing lens' but the three claims are separate and do not inherit from one another. Therefore the terms 'first', 'second', and 'third' do not provide further use within the claim language. Claim 5 and 6 would cause confusion when asking where a first lens would be that causes there to be a 'second' lens, and a similar argument for the 'third' lens of Claim 6 lacking a first and second lens. The Examiner recommends removing 'first', 'second' and 'third' from the claim text so that each claim recites a focusing lens in a specific position.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Spitzer (USPN: 6353503).

Regarding claim 1, Spitzer teaches spectacles with at least one lens (Fig. 11A, element 15) with a display region being defined on a rear surface of the lens (Fig. 4, element 25 is a mirror where the image is displayed). Further Spitzer teaches a data

Art Unit: 2673

display unit (Fig. 4, element 50) and a data projecting module (Fig. 4, elements 50, 51, and 52) for projecting the data onto the display region. Spitzer does not expressly name a data generating circuit but shows an external connection in Fig. 11A, element 57. The Examiner states that a data generating circuit is inherent with the device to provide information to the display unit via the connection so that information can be displayed by the system.

Regarding claim 2, Spitzer teaches the display unit (Fig. 4, element 50) can be a Liquid Crystal Display (col. 3, lines 59-60).

Regarding claim 3, Spitzer teaches the data projecting module comprises a light emitting device (Fig. 4, element 51) disposed behind the display unit (Fig. 4, element 50) to generate light so that data can be displayed on the lens.

Regarding claim 5, Spitzer teaches a focusing lens (Fig. 4, element 52) disposed between the data display unit (Fig. 4, element 50) and the display region (Fig. 4, element 25).

Regarding claim 12, Spitzer teaches the display region having an optical coating to reflect light rays (Fig. 4, element 25 and col. 3, lines 54-59).

6. Claims 13, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Spitzer (USPN: 6023372).

Regarding claim 13, the '372 patent teaches spectacles with at least one lens (Fig. 1, element 24) with a display region on the front of the lens (Fig. 9 shows the light rays extending out of the wave guide in the direction of the viewer, therefore, the region

Art Unit: 2673

where the light intersects the lens would be a display region on the front of the lens) and a rack pivotally mounted on the spectacle (Fig. 12 and 13 show the apparatus with a pivot arm, element 416). Further Spitzer teaches a display unit (Fig. 4, element 40) where the images shown from the display unit are projected through the lens. Spitzer does not expressly disclose a data generating circuit, but the Examiner states that such a device is inherent in the device to provide information to the display unit via an external connection (Fig. 4, element 70).

Regarding claim 14, the '372 patent teaches a focusing lens (Fig. 3, element 32) disposed between the data display unit and the display region of the lens.

Regarding claim 16, the '372 patent teaches the data display unit being a liquid crystal display (col. 3, lines 61-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spitzer (USPN: 6353503).

Regarding claim 4, as discussed above Spitzer teaches all of the limitations of claim 3 that are part of claim 4. However, Spitzer does not expressly disclose a focusing lens between the light source and display unit. The Examiner takes Official

Art Unit: 2673

Notice that it is old and well-known in the art of image projection systems to provide a lens between a light source and display unit such as a liquid crystal display to provide more light onto the display unit to provide a brighter image. At the time of invention it would have been obvious to one skilled in the art to provide a focusing lens between the display unit and light source to provide a brighter image for the final display.

Regarding claim 7, as discussed above Spitzer teaches all of the limitations of claim 3 that are part of claim 7. However, Spitzer does not expressly disclose a mirror between the light emitting device and the display unit for directing the light from the light source to the display unit. The Examiner takes Official Notice that it is well-known in the art of image projection systems to provide a reflective mirror between the light source and the image display unit for the purpose of directing light to the image display unit. This is used in systems with small volume requirements so that the device may be fit into smaller areas and also as a cup mirror around the back of a light source so that light emitted in directions not towards the display unit are reflected towards the display unit so that more light energy is sent to the display and not lost. At the time of invention it would have been obvious to one skilled in the art to provide a focusing lens between the display unit and light source to provide produce a device as specified in claim 7.

Regarding claim 8, as discussed above Spitzer teaches all of the limitations of claim 3 that are part of claim 8. However, Spitzer does not expressly disclose a light emitting diode as the light emitting device. The Examiner takes Official Notice that it is old and well-known in the art to use light emitting diodes as light sources for liquid crystal display devices. Further that the small size and of a light emitting diode would

Art Unit: 2673

be a normal choice as a light emitting device for a compact system such as one to be worn on glasses.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spitzer (USPN: 6353503) as applied to claim 3 above, and further in view of Spitzer (USPN: 5886822).

Regarding claim 6, Spitzer in the '503 patent discloses all of the limitations of claim 3 that are part of claim 6. However, Spitzer does not expressly disclose a focusing lens between the display region and a users eye. In the '822 patent, Spitzer discloses an eyeglasses display system with a lens (Figs. 11 and 12, element 370) between the display area (the back side of element 301 in Figs. 11 and 12).

Spitzer's '503 and '822 patents are analogous art because both deal with display systems to be coupled to eyeglasses. At the time of invention it would have been obvious to one skilled in the art that a further focusing lens, such as used in the '822 patent, could be placed between the display region and eye of the viewer in a system as disclosed by Spitzer in the '503 patent. The motivation for doing so would have been used "for color correcting dispersion effects in the optical system, or other lens combinations to reduce image aberrations ('822 patent, col. 7, lines 29-31)." Therefore, it would have been obvious to one skilled in the art to combine the teachings of Spitzer in the '503 and '822 patents to produce a device as specified in claim 6.

Art Unit: 2673

9. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spitzer as applied to claim 1 above, and further in view of Stubbs et al. (USPN: 6736759), hereinafter Stubbs.

Regarding claim 9, as discussed above Spitzer discloses all of the limitations of claim 1 that are part of claim 9. However, Spitzer does not expressly disclose a wireless signal receiving module to transmit signals to the data generating circuit to be displayed by the display unit. Stubbs discloses a wearable exercise monitoring system that can be worn by a user to monitor exercise and health of the wearer when exercising. Included with the system is an antenna and processing module (Fig. 2, elements 80 and 30) for receiving GPS (Global Positioning System) signals wirelessly and then transmitting them to the display unit. The signals are sent to processors (Fig. 5, elements 5 and 75) before being put onto the display screen (Fig. 5, element 52). Further, Stubbs discusses an embodiment of his system utilizing a display as part of glasses (Fig. 19).

Spitzer and Stubbs are analogous art because both deal with wearable display systems. At the time of invention it would have been obvious to one skilled in the art to combine an eyeglasses display system of Spitzer with a wireless receiving system of Stubbs to produce wearable eye glasses/spectacles display system with a wireless receiving unit to receive wireless signals for transmission to the display device. The motivation for doing so would have been to provide signals from outside the wearer so that the user would not be required to carry a memory device or wearable computer and still receive useful and dynamic information to be displayed on the display device.

Art Unit: 2673

Therefore it would have been obvious to combine Spitzer and Stubbs to produce a device as specified in claim 9.

Regarding claim 10, Stubbs discloses a wearable computer system able to receive Global Position System signals (Fig. 2, element 5, and col. 6, lines 49-55).

Regarding claim 11, Stubbs discloses a wearable system utilizing a pulse monitor (col. 15, lines 27-50).

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spitzer (USPN: 6023372).

Regarding claim 15, as discussed above Spitzer discloses all of the limitations of claim 13 that are part of claim 15. However Spitzer does not expressly disclose the pivot point connected to the spectacle. The Examiner takes Official Notice that it would have been obvious to one skilled in the art that the connection of the pivot to the spectacles or to a further body of the display system would be a matter of design choice. Some wearable display systems within the art are made to be clipped onto the glasses such as devised by Spitzer, whereas other glasses display systems are produced with the display unit as an integral portion of the glasses usually along the earpiece. Therefore, it would have been an obvious chose on a system where the display is part of the earpiece for a display unit with an external waveguide such as disclosed by Spitzer to have a pivot point coupled to the glasses frame so that the display system could be moved out of the way of the lens when not in use.

Art Unit: 2673

11. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spitzer (USPN: 6023372) as applied to claim 13 above, and further in view of Stubbs.

Regarding claim 17, as discussed above Spitzer discloses all of the limitations of claim 13 that are part of claim 17. However, Spitzer does not expressly disclose using a wireless signal receiving module to receive data to be send to the data generating circuit and then to the display. Stubbs discloses a wearable exercise monitoring system that can be worn by a user to monitor exercise and health of the wearer when exercising. Included with the system is an antenna and processing module (Fig. 2, elements 80 and 30) for receiving GPS (Global Positioning System) signals wirelessly and then transmitting them to the display unit. The signals are sent to processors (Fig. 5, elements 5 and 75) before being put onto the display screen (Fig. 5, element 52). Further, Stubbs discusses an embodiment of his system utilizing a display as part of glasses (Fig. 19).

Spitzer and Stubbs are analogous art because both deal with wearable display systems. At the time of invention it would have been obvious to one skilled in the art to combine an eyeglasses display system of Spitzer with a wireless receiving system of Stubbs to produce wearable eye glasses/spectacles display system with a wireless receiving unit to receive wireless signals for transmission to the display device. The motivation for doing so would have been to provide signals from outside the wearer so that the user would not be required to carry a memory device or wearable computer and still receive useful and dynamic information to be displayed on the display device.

Art Unit: 2673

Therefore it would have been obvious to combine Spitzer and Stubbs to produce a device as specified in claim 17.

Regarding claim 18, Stubbs discloses a wearable computer system able to receive Global Position System signals (Fig. 2, element 5, and col. 6, lines 49-55).

Regarding claim 19, Stubbs discloses a wearable system utilizing a pulse monitor (col. 15, lines 27-50).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Spitzer et al. (USPgPub: 2003/0090439) discloses a system with a liquid crystal display and light emitting diode light source.

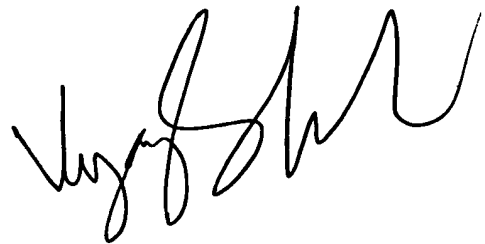
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven E. Holton
September 2, 2005
Art Unit 2673

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a stylized, flowing script.

VIJAY SHANKAR
PRIMARY EXAMINER